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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,357	10/30/2000	Stefan Klemens Muller	5150-45700	1650

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EXAMINER	
TRUONG, LECHI	
ART UNIT	**PAPER NUMBER**
2126	8

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/702,357	MULLER ET AL.	
	Examiner	Art Unit	
	LeChi Truong	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-15 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following is indefinite:

As to claims 1-12, the use of the word " characterized" is inappropriate since 35 USC § 112, second paragraph, requires the claims to particularly point out and distinctly claim the invention, not merely its characteristics. Furthermore, if this word is eliminated, then the remaining format of the claim should be modified in order to reflect this correction

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims **1, 3, 5, 6, 10 –15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al (US Patent 5,293,597) in view of Allegrucci et al (US 5,428,779) and further in view of Baker et al (US. 5,369,749).

5. As to claim 1, Jensen teaches a target function (process B, col 2, ln 55-68/ col 3,l n 45-68/ col 4, ln 35-68), start function (process C, col 2, ln 55-68/ col 3,l n 45-68/ col 4, ln 35-68), a processor with a memory unit (MMU)(a memory management unit MMU, col 1, ln 28-58/col 4, ln 35-67/ col 5, ln 1-45), a computer (CPU, col 1, ln 10-55), a operating system (operating system, col 2, ln 49-55), a component of first task (read /write, col 2, ln 54-68/col 5, ln 48-68), a first memory context (a context identification of read, col 2, ln 55-68), a second memory context(the context designation of write, col 2, ln 55-68).

6. Jensen does not teach a context switch from the first memory context into the other memory context a reversed after the execution. However, Allegrucci teaches a context switch from the first memory context into the other memory context a reversed after the execution (context switch, switch from one context to another context, restoring and switching tasks, col 2, ln 9-20/col 3, ln 1-29/ ln 48-68).

7. It would have been obvious to one of the ordinary skill in the art at time invention was made to combine the teaching of Jensen and Allegrucci because the Allegrucci's context switch, switch from one context to another context, restoring and switching tasks" would provide the context switching mechanism that can archive the necessary context switching speed, and thus keep up with multitasking application.

8. Jensen and Allegrucci do not teach the direct call of a target function by a start function. However, Baker teaches the direct call of a target function by a start function (each S/88 processor element can access (or direct the access to) the S/370 main storage area / col 28 ln 60-68 to col 29, ln 1-31/ the S/88 must access the S/370 address space, col 21, ln 54-68 to col 22, ln 1-5/ col 15, ln 54-68 to col 16,l n 1-10) the S/88 and S 3/70 was merged into one physical and the S/88 can direct access to S/370).

9. It would have been obvious to one of the ordinary skill in the art at time invention was made to combine the teaching of Jensen, Allegruci and Baker because Baker's "each S/88 processor elelement can access (or direct the access to) the S/370 main storage area" would provide a method and means for direct transfer of information between application programs running on distinct processors without utilizing the services of one or both of the corresponding operating systems

10. As to claim 3, Jensen teaches part of first tack (VB, Fig 2), part of second task (VC, Fig .2), target function (process C, Fig. 2), a new memory context (physical address within memory 12, col 4, ln 21-68/ col 3, ln 50-60/ fig. 2).

11. Jensen does not teach a context switch is performed into the shared memory. However, However, Allegrucci teaches context switch, switch from one context to another context, restoring and switching tasks (col 2, ln 9-20/col 3, ln 1-29/ ln 48-68).

12. It would have been obvious to apply the teaching of Allegrucci to Jensen in order to provide the context switching mechanism that can achieve the necessary context switching speed, and thus keep up with multitasking application.

13. **As to claim 5**, Jensen teaches deactivating the interrupt handling (no need to switch the MMU back and forth between process, col 3, ln 1-15).

14. **As to claim 6,** Baker teaches no program steps containing a call the operating system (without utilizing the services of one or both operating system, col 4, ln 35-42/each S/88 processor elelement can access (or direct the access to) the S/370 main storage area / col 28 ln 60-68 to col 29, ln 1-31/ the S/88 must access the S/370 address space, col 21, ln 54-68 to col 22, ln 1-5/ col 15, ln 54-68 to col 16,l n 1-10) the S/88 and S 3/70 was merged into one physical and the S/88 can direct access to S/370).

15. **As to the claim 10-15**, they are apparatus claims of claims 1-3; therefore, they are rejected for the same reasons as claims 1-3 above.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al (US. Patent 5,293,597) in view of Baker et al (US. 5,369,749) in view of Allegrucci et al (US 5,428,779) and further in view of Golson (US. Patent 5,390,332).

17. **As to claim 2,** Jensen teaches physical address (physical address, col 4, ln 30-45). Jensen, Baker and Allegrucci do not teach the physical address of the memory context of task contain the target function is written into the MMU control register. However, Golson teaches the physical address of the memory context of task contain the target function is written into the MMU control register (address space of next process ... changing the MMU table and mask register interface, Col 8, ln 32-45).

18. It would have been obvious to one of the ordinary skill in the art at time invention was made to combine the teaching of Jensen, Baker, Allegrucci and Golson because Golson's "address space of next process ... changing the MMU table and mask register interface" would switch from one protected mode application to another, which is independent of the microprocessor.

19. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al (US. Patent 5,293,597) in view of Baker et al (US. 5,369,749), in view of Allegrucci et al (US 5,428,779), and further in view of Devic (US. Patent 5,987,582).

20. As to claim 4, Jensen teaches memory, mass storage, a hard disk (memory, col 1, and ln 26-54), and memory region of copy memory context (the physical address of process (col 4, ln 30-68).

21. Jensen, Baker and Allegrucci do not teach memory context is locked, avoid swapping out. However, Devic teaches memory context is locked, avoid swapping out (the first memory block is locked to prevent swapping of the first memory (col 2, ln 65-67 to col 3, ln 1- 15).

22. It would have been obvious to one of the ordinary skill in the art at time invention was made to combine the teaching of Jensen, Baker, Allegrucci and Devic because Devic's "the first memory block is locked to prevent swapping of the first memory" would make the direct call of a function by a software module more consistent.

23. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al (US. Patent 5,293,597), Baker et al (US. 5,369,749), in view of Allegrucci et al (US 5,428,779), and further in view Kalaynaraman (process Management Concepts).

24. **As to claim 7,** Jensen, Baker and Allegrucci do not teach a function is blocked. However, Kalaynaraman teaches a function is blocked (blocking wait, session: Synchronous communication).

25. It would have been obvious to one of the ordinary skill in the art at time invention was made to combine the teaching of Jensen, Baker, Allegrucci and Kalaynaraman because Kalaynaraman's blocking wait would make method for direct cal of function by a software module more consistent.

26. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al (US. Patent 5,293,597) in view of Baker et al (US. 5,369,749) in view of Allegrucci et al (US 5,428,779) and further in view of Endicott (US Patent 6,029,206).

27. **As to claim 8,** Jensen, Baker and Allegrucci do not teach a processing cycle. However, Endicott teaches a processing cycle (locking cycle, col 2, ln 40-62).

28. It would have been obvious to one of the ordinary skill in the art at time invention was made to combine the teaching of Jensen, Baker, Allegrucci and Endicott because Endicott's locking cycle would provide an optimal performance from computers running computer programs.

29. Claim **9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al (US. Patent 5,293,597) in view of Baker et al (US. 5,369,749) in view of Allegrucci et al (US 5,428,779) and further in NEC (Server-Dispenrsing database implementation procedure via flag control involves performing data processing of content of access establishment demand using server side flag control function after access establishment demand is accepted).

30. As to claim 9, Jensen, Baker and Allegrucci do not teach a flag. However, NEC teaches a flag (flag control, page 1).

31. It would have been obvious to one of the ordinary skill in the art at the time invention was made to combine the teaching of Jensen, Baker, Allegrucci and NEC because NEC's flag control would improve the capability and the reliability of the data processing of the access establishment demand.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (703) 305 5312. The examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 703-305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

LeChi Truong

March 18, 2004

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